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ABSTRACT

The membership of the Undergraduate Studies Committee of the American Council of Industrial Arts Teacher Educators and the Research Committee of the Industrial Arts Division of the American Vocational Association have formulated jointly this national study in order to obtain accurate data as a basis for program innovations. Information was supplied by means of a questionnaire sent to department chairmen of teacher education programs at public and private colleges and universities. Usable responses were returned from 176 of 227 institutions having programs in industrial teacher education. Numerous tables present the data, which consist of answers to 73 survey questions. Grouped according to gross totals, percentage of total response, rank order, and response statement, the data cover such areas as recent curriculum developments, classroom facilities, visits to student teachers, course content, faculty organization, and student enrollment. A list of colleges and universities contacted for the study is included. (AG)

ED 069866

A NATIONAL STATUS STUDY OF INDUSTRIAL ARTS TEACHER EDUCATION

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by

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A NATIONAL STATUS STUDY OF INDUSTRIAL ARTS TEACHER EDUCATION*

I. STATEMENT OF THE PROBLEM

Educators in the Industrial Arts Teacher Education Program have a need for understanding the status of their profession. This understanding can be achieved by referring to available factual information concerned with teacher education. Accurate data enable leaders and decision makers of the profession to justify changes and financial support when local institutions require innovations or advances in their industrial arts programs. Factual data will provide the basis for a persuasive position when approaching department chairmen, deans, and other administrators when changes are necessary.

Information concerning teacher education nationally is needed for curriculum research, curriculum development, and to ascertain

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*The joint membership of the Undergraduate Studies Committee of the American Council of Industrial Arts Teacher Educators -- A. I. A. A. and the Reserarch Committee of the Industrial Arts Division of the A. V. A. have formulated a Status Study of Teacher Education.

the direction of Industrial Arts Teacher Education Program in the United States.

In order to implement change in the Industrial Arts Teacher Education programs systematically, the members of the profession need a logical rationale from which to proceed. This rationale composed of facts, statistics, and pertinent information can assure a greater degree of success when attempting to persuade faculties, deans, and administrators of the need for new and innovative programs whether they concern the curriculum core structures of Power, Graphic Communication, Materials and Process, I.A.C.P., or career education.

II. SOURCES OF DATA AND PROCEDURE

The data for this study were obtained through the analysis of information from the National Status Study survey instrument. The information was supplied by the various Teacher Education Department Chairmen or a designated representative of the chairman.

The study's primary concern was with Industrial Arts Teacher Education, thus a small number of colleges did not respond because their teacher education programs contained only Vocational Education programs.

Programs which are designated as Industrial Education and have programs designed for Industrial Arts and variations of Industrial Arts programs are included. Programs having no relationship to Industrial Arts or those which were specifically designed for Vocational-Industrial Education are not included in this study.

The data were analyzed with the aid of a computer that produced a frequency count per item part, a gross total by item part, and a per cent of total responses by item part.

In addition the data were made graphic by a histogram which was a reflection of the total per cent response per item part.

Identification of the Population

The list of Industrial Arts Teacher Education programs that contributed to the data was compiled from the Industrial Teacher Education Directory--Institutions and Personnel,[1] 1970-1971. The directory is a list of public and private colleges and universities that have programs of industrial teacher education.

The survey instrument was sent to 227 different institutions, of which 176 responded with usable returns. A 77+ percentage was realized by the study. A number of responses indicated that they had no Industrial Arts Teacher Education Programs, or were closing their department. A few responses came back with incomplete data and were not useful. The remainder did not return the questionnaire for evaluation and thus were not included in the data analysis.

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[1]G. S. Wall, compiler, Industrial Teacher Education Directory--Institutions and Personnel, A Joint Publication by the American Council on Industrial Arts Teacher Education and the National Association of Industrial Teacher Education (Menomonie, Wisconsin: Stout State College, 1970-71).

TABLE I

Distribution of the Population

Responses of Colleges and Universities	Number
Completed Status Study Survey	176
Responded - No Department of Industrial Arts Teacher Education	11
Responded but Incomplete Survey	4
Did not respond	36
Number of Colleges and Universities Contacted	227

Development of Research Instrument

From the Report of the Proposed Status Study on Industrial Arts Teacher Education:

"On May 18, 1967, Dr. Marshall Schmitt met with Drs. Rutherford Lockette and Robert Blum regarding a proposed teacher education status study which was presented to the Executive Committee of the American Council on Industrial Arts Teacher Education last year (1966) at the convention. The significant points of the discussion are as follows:

1. The rationale should indicate that the most important facet of the study will be identifying and studying the depth those teacher education institutions which have made significant

curriculum changes within the last few years and a representative sample of other programs which have not changed significantly within the past several years.

2. The rationale should also indicate that the study will result in a description of the difference between those programs which have changed and those which have not changed.
3. The rationale should point up the fact that the study will concentrate on the process of change as well as the changes themselves.
4. It should be pointed up that this study will aid other institutions in making changes in curriculum and will provide good background information for developing pilot teacher education programs. *
5. The basic descriptive information should be retained as a part of the study and Gus Wall will be asked to work with the committee to enlarge the information which he collects.

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*Objectives included in this survey.

6. The objectives should be narrowed down and the procedure with sample instruments will be specified.*

7. The best possible source of funds for such a project would be through the Regional Offices of the Cooperative Research Program. Changes of funding would be improved by keeping the amount requested under $10,000.

To date, the original proposal has not been revised nor have funds been sought. This committee still believes that the project should be undertaken and individuals who may be interested in conducting such research should contact Dr. Lockette, Chairman of the Research Committee.

It is the opinion of this committee that every effort should be made to outline a research program and then to attempt to involve graduate students from various institutions in the actual conduct of the research.[2]"

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* Objectives included in this survey.

[2] Marshall Schmitt, Rutherford Lockette, and Robert Blum. Report on Proposed Status Study of Industrial Arts Teacher Education. Presented to: American Council on Industrial Arts Teacher Education Undergraduate Studies Committee at the American Industrial Arts Association Convention 1968.

December 4, 1967 minutes of the Industrial Arts Division Research Committee of the American Vocational Association chaired by Dr. Rutherford Lockette reveal: "This morning's meeting of the I. A. Division Research Committee consisted of a review of projects established by objectives adopted at the December 5, 1966 meeting in Denver, Colorado. These objectives are:

1. To identify the problem and critical questions arising in Industrial Arts Education.
2. To stimulate appropriate research personnel to take action on the questions and problems in Industrial Arts Education.
3. To see that researches, as directed to the Industrial Arts Research Committee by the Policy and Planning Committee, are undertaken.

As a result of these objectives, five projects were initiated as follows:

Project #1. To see that national surveys of Industrial Arts Education be made regularly.

A. Program identification and the compiling of pertinent related data.

B. Doctoral and Staff Studies in Progress.[3"]

(The minutes for projects 2, 3, 4, and 5 are not appropriate to the monograph and are not included herein.)

At this meeting Chairman Lockette assigned project 1A to Dr. Jack W. Chaplin to proceed with the research for the Study of Industrial Arts Teacher Education to develop a body of data which will be helpful in justification of new or expanding teacher education programs.

During the year Dr. Chaplin prepared a rough draft of an instrument and proposed categories for study of project 1A. The Interim Report presented to the Industrial Arts Research Committee at their annual meeting in December 1968. The categories suggested were as follows:

Degree requirements
Staff-Student ratio
Faculty load (full time)
Emphasis on technical teaching
Professional teaching

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[3] "Minutes of the Industrial Arts Division Research Committee, American Vocational Association, Cleveland, Ohio, December 4, 1967," p. 1. Ralph O. Gallington, Secretary Pro-tem.

Service Activities

Research Acitvities

Laboratory supervising technicians

Maintenance technical

Secretarial servcies

Cooperative program--internship

Faculty office space

Graduate laboratory facilities

Graduate special studies load factor

Replacement equipment budget

During the winter of 1968 Chairman Dr. Robert Blum of the Undergraduate Studies Committee of American Council of Industrial Arts Teacher Educators learned of the Research Committee's Project 1A and invited Dr. Chaplin to meet with him committee at the American Industrial Arts Convention in Las Vegas, Nevada, in April 1969. At this special meeting the officers of the two respective committees and officers of the sections of the two professional organizations strongly encouraged that the two committees proceed jointly on a status study of our profession.

Dr. Blum studied Dr. Chaplin's and Dr. Alvin Rudisill's earlier research, questionnaires, and suggested these broad categories:

ADMINISTRATION

- Personnel
- Budget

STAFF LOAD AND ASSIGNMENTS

- Teaching
- Research
- Service
- Advisement

DEGREE PATTERNS

- Degrees offered
- General requirements
- Industrial arts technical requirements
- Professional requirements

COURSE OFFERINGS

- Major courses
- Service courses
- General education courses
- Field experiences

RELATIONSHIPS WITH OTHER UNITS

- Industrial technology
- Engineering
- Business
- Industries

SERVICES AVAILABLE

- Secretarial
- Maintenance Men
- Supply clerks
- Graders
- Computer
- Research planning
- Audio-visual preparation

FACILITIES AND EQUIPMENT

- Office
- Laboratories
- Conference
- Machines
- Tools

DEPARTMENTAL CHANGES

- New departmental name
- New area names
- New courses
- New facilities
- New equipment
- New options

At the Las Vegas meeting, this list of procedures was presented by Dr. Blum and agreed upon:

1. Develop a survey instrument to supplement any on going studies.
   a. Establish broad categories of information.
   b. Have listing of categories reviewed by selected individuals for validity and completeness.
   c. Revise if necessary.
   d. Develop pertinent items within each category.
   e. Have the items reviewed by selected individuals for validity and completeness.
   f. Revise as necessary.
   g. Design instrument format.
   h. Have instrument reviewed by selected individuals for clarity, ease of completion, completeness and validity.
   i. Revise as necessary.
2. Reproduce instrument
3. Conduct pilot study
   a. Select participants
   b. Distribute questionnaire
   c. Summarize the results
4. Revise the instrument
5. Conduct full-scale study

During 1969 Dr. Blum resigned from the Undergraduate Studies Committee and went into private business, and Dr. Chaplin was appointed as Chairman of the Undergraduate Studies Committee.

On June 5, 1969, the first phase of the Status Study was mailed to the following groups of selected individuals for review of validity and completeness and returned during the summer:

Reviewing Panel

Ralph Bohn, San Jose State College, San Jose, California
Robert Buxton, State University College, Buffalo, New York
Fred Kagy, Illinois State University, Normal, Illinois
Irvin Lathrop, California State College, Long Beach, California
C. Dale Lemons, Murray State University, Murray, Kentucky
Joe Littrell, Arizona State University, Tempe, Arizona
Rudy Lockett, University of Michigan, Ann Arbor, Michigan
Don Lux, Ohio State University, Columbus, Ohio
Howard Nelson, University of Minnesota, Minneapolis, Minnesota
Wendell Roy, University of West Florida, Pensacola, Florida

Industrial Arts Division Research Committee of the A. V. A.

Jack Chaplin
Ralph Gallington
W. R. Miller
Orville Nelson
G. W. Neubauer
William Spence (Chairman)
Ronald Stadt
Jerry Streichler

American Council on Industrial Arts Teacher Education Undergraduate Studies Committee of the A. I. A. A.

Robert Anderson
Jack Chaplin (Chairman)
Dennis Foley
Delmar Larsen
Robert Ryan
William Wolansky

During the spring of 1970, the new categories suggested by the panel and question items were written, and a new instrument format was adopted and questions were revised.[4]

In December 1970, a progress report was presented to the Research Committee of the Industrial Arts Division of the A.V.A. The report included an analysis of the responses and changes suggested by the reviewing panel and the committee members. A request for funds was presented.

At the A.I.A.A. Convention in April 1971, a prototype of the Status Study instrument was presented to the Undergraduate Studies Committee and section officers of the two professional organizations and final approval for the instrument was obtained. Funds were also allocated for printing and mailing costs.

The final instrument was printed and mailed in May so that the Departmental Chairmen would receive them during the first week of June 1971.

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[4]Graduate Students who helped with the organizing and relocating and typing of the survey Instrument questionnaire were:

Gerald Hamilton
Robert Lombardy
Jack Eves
Gerald Engel

A follow-up was conducted during the fall of 1971 to obtain as many questionnaire as possible for analysis. The computer program written for the analysis was prepared by Mr. Maurice Bird of the San Jose State Industrial Studies faculty.

The first analysis of raw data was available for the December A.V.A. Convention at Portland, Oregon, and was presented to the Research Committee in the form of an oral report. The Research Committee made recommendations concerning the publication of the monograph.

Rough draft of the monograph was presented to the Undergraduate and Publication Committee at the Dallas convention, April 1972.

III. FINDINGS

The findings of this study were compiled from the data obtained from the categories of the instrument such as Administration, Budget, Staff load, Assignment, Degree Patterns, Relationships with Other Units, Departmental Changes, Facilities and Equipment, Course Offerings, and Services Available. Each of these categories have sub-questions and have up to twelve possible responses under each question. The questions presented five to

twelve possible responses. A college or university program may fit any number of possible parts per question. The chairmen marked every response which applied, thus parts marked under each question will total greater than the number of schools.

The questions, the Gross totals, Per cent of Total response, and Rank order are reported for the reader's analysis of each question. Based upon a 77+ per cent response from the departmental chairman of the profession, the findings are as follows:

ADMINISTRATION, BUDGET

Question 1. Is the program of Industrial Arts Teacher Education a single purpose department or is it a combination of several disciplines?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
77	43.8	1	Ind Arts & Ind Tech
50	28.4	2	Ind Arts & Voc Ed
43	24.4	3	Ind Arts Only
37	21.0	4	Ind Ed & Ind Tech
17	9.7	5	Other
6	3.4	6	Practical Arts & Voc Ed
3	1.7	7	Ind Ed & Transportation
2	1.1	8	Ind Arts & Fine Arts

Question 2. Who determines salary policies for new faculty members?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
97	55.1	1	School Dean
79	44.9	2	Department Chairman
66	37.5	3	The Academic Vice President
64	36.4	4	President of the College or University
18	10.2	5	Other
12	6.8	6	Dept Committee on Appointments
4	2.3	7	Chief Official in Charge of Instruction
3	1.7	8	Chief Official in Charge of Faculty
1	.6	9	Chief Official in Charge of Business Office

Question 3. In what manner is money distributed each year for the various laboratory expendible supply budgets?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
95	54.0	1	Determined by Dept Chairman
37	21.0	2	Negotiations between Ind faculty members and dept
32	18.2	3	Lab Fee & Revolving Fund
28	15.9	4.5	By Area Dept Chairman
28	15.9	4.5	By Area Chairman (teaching areas)
24	13.6	5	Other
21	11.9	6	Distributed by Dept Committee
12	6.8	7	Based on No. of Students Taught in Laboratory
5	2.8	8	First come, first serve
0	0	9	Lab Fee Only

Question 4. How much money is allocated each year for departmental capital outlay (equipment over $25) budget, exclusive of new building funds?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
33	18.8	1	3001-5000
26	14.8	2	less than 500
25	14.2	3	15,001 or more
20	11.4	4	2001-3000
19	10.8	5	5001-8000
17	9.7	6	10,001-15,000
14	8.0	7	501-1000
13	7.4	8.5	1001-2000
13	7.4	8.5	8001-10,000

Question 5. How is the department budget controlled?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
120	68.2	1	Within the department
63	35.8	2	Negotiation between dept & admin
55	31.3	3	By the college chancellor
15	8.5	4.5	Negotiation between college administrators
15	8.5	4.5	Program budget vs line item
14	8.0	5	Periodic modernization review budget for capital expenditures
8	4.5	6	Ratio to student population
6	3.4	7	Other
5	2.8	8	Special budget for capital expenditures for govt surplus
3	1.7	9	By chancellor's office

Question 6. What type of replacement equipment budget does your Industrial Arts teacher education department have?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
125	71.6	1	Replacement justification when equipment is broken or worn out
39	22.2	2	Replaced from govt surplus equip.
36	20.5	3.5	Direct request to college controller's office
36	20.5	3.5	None
28	15.9	4	Aid from industry
12	6.8	5	Grand in aid from govt
7	4.0	6	Other
5	2.8	7	A pro-rated or amortized budget program
3	1.7	8	20-yr replacement program of equipment budget
2	1.1	9	10-yr replacement of equip. budget

Question 7. What is the square footage for Industrial Arts teacher education buildings planned for new contruction to 1975?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
113	64.2	1	None
17	9.7	2	10,000-19,999 sq ft
9	5.1	3	50,000-59,999 sq ft
7	4.0	4.5	30,000-39,999 sq ft
7	4.0	4.5	40,000-49,999 sq ft
6	3.4	5.5	20,000-29,999 sq ft
6	3.4	5.5	60,000-99,999 sq ft
2	1.1	6.5	100,000-149,999 sq ft
2	1.1	6.5	150,000 or more

Question 8. What is the total square footage in the Industrial Arts facility?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
49	27.8	1	Less than 20,000 sq ft
39	22.2	2	20,000-29,999 sq ft
22	15.9	3	40,000-59,999 sq ft
19	10.8	4	30,000-39,999 sq ft
15	8.5	5	60,000, 79,999 sq ft
7	4.0	6.5	80,000-99,999 sq ft
7	4.0	6.5	200,000 or more
3	1.7	7.5	100,000-149,999 sq ft
3	1.7	7.5	150,000-199,999 sq ft

STAFF, LOAD AND ASSIGNMENTS

Question 9. During the last ten years what new budget categories have been added to your annual budget?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
111	63.1	1	Small equipment $20,000 or less
81	46.0	2	Remodeling of a laboratory
69	39.2	3	A new building
34	19.3	4	The building of a complete new laboratory
27	15.3	5	An addition to an existing bldg.
16	9.1	6	Other
15	8.5	7	Purchase of a $60,000 piece of equipment

Question 10. What is the total enrollment in your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
33	18.8	1	76-125 students
28	15.9	2	501 or more
25	14.2	3	less than 75 students
18	10.2	4.5	301-400 students
18	10.2	4.5	126-175 students
15	8.5	5.5	201-250 students
15	8.5	5.5	251-300 students
14	8.0	6	401-500 students
10	5.7	7	176-200 students

Question 11. How many graduate assistants are allocated to your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
108	61.4	1	0-2
37	21.0	2	3-5
13	7.4	3	6-10
4	2.3	4	11-15
2	1.1	5	16-20

(no school reported having more than 20 graduate students)

Question 12. How many clock hours of teaching lecture classes does it take to make a full teaching load?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
95	54.0	1	10-12
56	31.8	2	13-15
14	8.0	3	7-9
4	2.3	4	4-6
3	1.7	5.3	1-3
3	1.7	5.3	16-18
3	1.7	5.3	19-21
2	1.1	6.5	22-24
2	1.1	6.5	25 or more

Question 13. How many clock hours of teaching laboratory classes does it take to make a full teaching load?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
46	26.1	1	16-18
30	17.0	2	10-12
28	15.9	3	22-24
26	14.8	4	13-15
22	12.5	5	19-21
17	9.7	6	25 or more
5	2.8	7	4-6
3	1.7	8	7-9
1	.6	9	1-3

Question 14. How many full-time Industrial Arts teacher education faculty members are in your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
73	41.5	1	0-5
46	26.1	2	6-10
28	15.9	3	11-15
10	5.7	4	16-20
4	2.3	5.5	21-25
4	2.3	5.5	26-30
3	1.7	6	41 or more
1	.6	7	36-40

Question 15. What percentage of the full-time Industrial Arts teacher education faculty is under 30 years of age?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
99	56.3	1	0-5%
19	10.8	2	21-30%
18	10.2	3	11-20%
15	8.5	4	6-10%
12	6.8	5	31-50%
4	2.3	6	51-75%

Question 16. What percentage of the full-time Industrial Arts teacher education faculty is between 30 to 45 years of age?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
64	36.4	1	51-75%
56	31.8	2	31-50%
22	12.5	3	21-30%
16	9.1	4	0-5%
4	2.3	5.5	6-10%
4	2.3	5.5	11-20%

Question 17. What percentage of the full-time Industrial Arts teacher education faculty is between 45 to 65 years of age?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
43	24.4	1	31-50%
34	19.3	2	0-5%
31	17.6	3	51-75%
25	14.2	4	21-30%
20	11.4	5	11-20%
14	8.0	6	6-10%

Question 18. How many part-time Industrial Arts teacher education faculty positions are there in your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
117	66.5	1	0-2
23	13.1	2	3-4
9	5.1	3	5-6
8	4.5	4	7-8
5	2.8	5	11-12
3	1.7	6	9-10
1	.6	7.5	13-14
1	.6	7.5	17 or more
0	0	8	15-16

Question 19. What categories receive Personnel or Technical staff support for research?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
76	43.2	1	Teaching (innovations and new curriculum)
31	17.6	2	Administration
28	15.9	3	Counseling (undergraduate)
27	15.3	4.5	Writing (articles and/or books)
27	15.3	4.5	Laboratory equipment design const.
26	14.8	5	Counseling (graduate)
25	14.2	6	Committee (state or national)
23	13.1	7	Departmental committees
20	11.4	8	Other
11	6.3	9	Design & construction of prototype laboratory

Question 20. What assistance is provided by your department for research activities of individual faculty members?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
101	57.4	1	Computer service available to individual faculty member engaged in research
97	55.7	2	Secretarial & typing support for research
59	33.5	3	Material or hardware for research
58	33.0	4	Space & facilities for research activities
57	32.4	5	Student employees to aid the faculty researcher
44	25.0	6	Graduate teaching assts to aid the researching faculty member

Question 20 cont'd

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
43	24.4	7	Release faculty time for research activity
33	18.8	8	Travel funds for research activities
28	15.9	9	Technical people to build research equipment
16	9.1	10	Other

Question 21. What percent of your faculty's time is allotted to teaching?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
69	39.2	1	91-100%
46	26.1	2	81-90%
29	16.5	3	71-80%
11	6.3	4	61-70%
5	2.8	5.5	31-40%
5	2.8	5.5	51-60%
4	2.3	6	41-50%
3	1.7	7	0-20%
2	1.1	8	21-30%

Question 22. What percent of your faculty's time is allotted to administration?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
125	71.0	1	0-10%
28	15.9	2	11-20%
12	6.8	3	21-30%
4	2.3	4	31-40%
1	.6	5.5	51-60%
1	.6	5.5	81-100%
0	0	6.3	41-50%
0	0	6.3	61-70%
0	0	6.3	71-80%

Question 23. What percent of your faculty's time is allotted to research?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
127	72.2	1	0-5%
30	17.0	2	6-10%
7	4.0	3	11-20%
2	1.1	4	21-30%
1	.6	5.5	31-40%
1	.6	5.5	61-70%
0	0	6.3	41-50%
0	0	6.3	51-60%
0	0	6.3	71-100%

Question 24. What percent of your faculty's time is allotted to professional committees (national or state)?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
81	46.0	1	0-3%
49	27.8	2	4-5%
27	15.3	3	6-10%
6	3.4	4	11-20%
3	1.7	5	21-30%
1	.6	6	41-50%
0	0	7.3	31-40%
0	0	7.3	51-60%
0	0	7.3	61-100%

Question 25. What percent of your faculty's time is allotted to departmental committees?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
107	60.8	1	0-5%
44	25.0	2	6-10%
8	4.5	3	11-15%
4	2.3	4	16-20%
2	1.1	5	31-40%
1	.6	6.5	21-30%
1	.6	6.5	41-50%

Question 26. What percent of your faculty's time is allotted to counseling?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
69	39.2	1	6-10%
61	34.7	2	0-5%
21	11.9	3	11-15%
10	5.7	4	16-20%
5	2.8	5	21-30%
4	2.3	6	31-40%
1	.6	7	61-100%
0	0	8.5	41-50%
0	0	8.5	51-60%

Question 27. What percent of your faculty's time is allotted to assisting M. A. or PhD candidates?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
59	33.5	1	0-1%
30	17.0	2.5	6-10%
30	17.0	2.5	2-3%
23	13.1	3	4-5%
8	4.5	4	11-15%
6	3.4	5	21-30%
3	1.7	6	16-20%
0	0	7.5	31-40%
0	0	7.5	41-100%

Question 28. What percent of your faculty's time is allotted to Inter-divisional or University committees?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
54	30.7	1	2-3%
50	28.4	2	0-1%
35	19.9	3	4-5%
25	14.2	4	6-10%
3	1.7	5	11-15%
2	1.1	6	21-30%
1	.6	7	41-100%
0	0	8.5	16-20%
0	0	8.5	31-40%

Question 29. What percent of your faculty's time is allotted to service committees?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
86	48.9	1	0-1%
41	23.3	2	2-3%
20	11.4	3	4-5%
7	4.0	4	6-10%
2	1.1	5.5	11-15%
2	1.1	5.5	21-30%
1	.6	6	41-100%
0	0	7.5	16-20%
0	0	7.5	31-40%

Question 30. Which of the following are computed as part of your faculty teaching load?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
96	54.5	1	Administration
64	36.4	2	Assisting M.A. or PhD candidates
62	35.2	3	Counseling
46	26.1	4	Research
38	21.6	5	Departmental Committees
36	20.5	6	Professional Committees
28	15.9	7	Inter-divisional Committees
26	14.8	8	Other
20	11.4	9	Service Committees
12	6.8	10	Writing

Question 31. What is the percentage of teacher education majors to non-teaching technical majors?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
53	30.1	1	90% teaching students
31	17.6	2	50% teaching students
16	9.1	3	70% teaching students
14	8.0	4	80% teaching students
12	6.8	5.5	60% teaching students
12	6.8	5.5	30% teaching students
10	5.7	6	20% teaching students
6	3.4	7	10% teaching students
3	1.7	8	40% teaching students

Question 34. What research courses have been added during the last ten years?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
43	24.4	1	Curriculum
42	23.9	2	Research Methods
36	20.5	3	Computers
26	14.8	4	Statistics
22	12.5	5	Other
21	11.9	6	Historical
15	8.5	7	Occupational
7	4.0	8	Systems Research
6	3.4	9	Motivational
4	2.3	10	Ecological

Question 35. Do any of the degrees offered in your department include courses in any of the following?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
118	67.0	1	Industrial Processes
111	63.1	2.5	Plastics
111	63.1	2.5	Industrial Materials
104	59.1	3	Graphic Communication
69	39.2	4	Pneumatics & Hydraulics
52	29.5	5	Instrumentation
49	27.8	6	Numerical control
42	23.9	7	Automation & Control
18	10.2	8	Cybernetics

Question 36. Is your faculty presently organizing courses and areas of concentration in any of the following towards a degree?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
52	29.5	1	Plastics
48	27.3	2	Industrial Materials
43	24.4	3	Industrial Processes
35	19.9	4	Graphic Communication
27	15.3	5	Pneumatics & Hydraulics
21	11.9	6	Numerical Control
18	10.2	7	Instrumentation
13	7.4	8	Automation & Control
11	6.3	9	Ecology
5	2.8	10	Cybernation

Question 37. Has there been any major requirement curriculum change emphasizing science, math, art, or technology?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
63	35.8	1	Increase in tech req.
44	25.0	2	Increase in math req.
39	22.2	3	Increase in science req.
11	6.3	4	Decrease in science req.
9	5.1	5	Decrease in art req.
7	4.0	6	Increase in art req.
6	3.4	7	Decrease in tech req.
4	2.3	8	Decrease in math req.

Question 38. How many technical units (semester hours) are required for the Industrial Arts teaching major?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
67	38.1	1	Over 45 hours
33	18.8	2	40-41 hours
20	11.4	3	36-37 hours
16	9.1	4	32-33 hours
14	8.0	5	42-44 hours
8	4.5	6.5	30-31 hours
8	4.5	6.5	34-35 hours
7	4.0	7	38-39 hours
3	1.7	8	28-29 hours

Question 39. What teaching areas are offered within the major?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
160	90.9	1	Drafting
157	89.2	2.5	Woodworking
157	89.2	2.5	Metals
151	85.8	3	Electronics
130	73.9	4	Machine Shop
109	61.9	5	Crafts
104	59.1	6	Graphic Arts
100	56.8	7	Auto Mechanics
86	48.9	8	Other
54	31.7	9	Photography

Question 40. Which of the following areas are offered within the major through one course or a combination of courses?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
146	83.0	1	Metals Technology
145	82.4	2	Plastics Technology
130	73.9	3	Fluid Power Technology
123	69.9	4	Machine Tool Technology
103	58.5	5	Visual Communication & Design
71	40.3	6	Wood Technology
62	35.2	7	Transportation
54	30.7	8	Numerical Control

Question 41. How many technical units of shop classes are required by all industrial arts teaching students (such as a physical education major taking an I.A. minor)?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
63	35.8	1	19-24
24	13.6	2	16-18
9	5.1	3	7-12
7	4.0	4	0-6
5	2.8	5	13-15

Question 42. What technical areas of shop classes are offered?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
158	89.8	1	Drafting
156	88.5	2	Woodworking
154	87.5	3.5	General Metals
154	87.5	3.5	Electronics
144	81.8	4	Machine Shop
122	69.3	5	Crafts
110	62.5	6	Graphic Arts
100	56.8	7	Auto Mechanics
84	47.7	8	General Shop

Question 43. What additional technical areas of the shop requirements are offered?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
98	55.7	1	Power
81	46.0	2	Construction & Manufacturing
74	42.0	3	Materials
71	40.3	4	Processes
50	28.4	5	Communication
38	21.6	6	Transportation
32	18.2	7	Other
19	10.8	8	Automation
9	5.1	9	Cybernation
3	1.7	10	Environmental Design (Ecology)

Question 44. What professional courses are required for the Industrial Arts teaching major?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
160	90.9	1	Student Teaching
143	81.3	2	The Learner & Learning Processes (educational psychology)
140	79.5	3	Industrial Arts Class Mgt & Organization
121	68.8	4	Foundations of Secondary Education
111	63.1	5	Secondary School Field Experience
107	60.8	6	Curriculum Materials & Technology
81	46.0	7	History & Philosophy of Ind Arts & Voc Ed
67	38.1	8	Evaluation in Secondary Schools
42	23.9	9	Other
18	10.2	10	Occupational Guidance

RELATIONSHIP WITH OTHER UNITS

Question 45. Is the Industrial Arts Department involved with any of the following departments in an interdepartmental degree program? If so, which?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
54	30.7	1	Industrial Technology
46	26.1	2	Vocational Education
39	22.2	3	Business
29	16.5	4	Engineering

Question 45 cont'd

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
28	15.9	5	Art
24	13.6	6	Cooperative Education with Industries
16	9.1	7	Science
15	8.5	8	Computer Technology
10	5.7	9	Aeronautics

Question 46. What type of community field experience does your department offer the student?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
139	79.0	1	One semester of student teaching
78	44.3	2	One semester or less of observation in the public schools
55	31.3	3	One semester or one quarter professional internship
39	22.2	4	A summer or one semester industrial cooperative program
25	14.2	5	A field study in the public schools
17	9.7	6	Other
13	7.4	7	Community research & study team task force experience
8	4.5	8	Vocational administration internship

Question 46 cont'd

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
7	4.0	9	One year professional internship in the public schools
0	0	10	Two-year professional internship in the public schools

DEPARTMENTAL CHANGES

Question 47. Is your department providing or sponsoring any programs that are federally funded?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
47	26.7	1	Vocational teacher education
25	14.2	2	Small grant research
24	13.6	3	Other
21	11.9	4	Vocational Educational Research
10	5.7	5	NDEA
9	5.1	6	HEA, Higher Education Act
6	3.4	7	MDTA
5	2.8	8	National Science Foundation
4	2.3	9	ESEA, Title 3
3	1.7	10	EDDA

Question 48. If you are planning any significant changes in curriculum or if you have had any significant changes, when were they made or when will they be made?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
60	34.1	1	Within the next two years
44	25.0	2	Next year
32	18.2	3	A change was made this year
26	14.8	4	Last year
24	13.6	5	Within the next three years
23	13.1	6	Within the last two years
21	11.9	7	Within the last three years
11	6.3	8	No changes made or planned
4	2.3	9	Within the next two and a half years

Question 49. If your department has a follow-up program for graduates, how many graduates remain in the field serving in a capacity which is related to their degree after four years?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
18	10.2	1	80-99
16	9.1	2	200 and over
15	8.5	3	60-79
9	5.1	4	20-29
8	4.5	5	100-149
7	4.0	6	50-59
6	3.4	7	150-199
5	2.8	8.5	30-39
5	2.8	8.5	40-49

Question 50. What is the name of your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
62	35.2	1	Industrial Education
50	28.4	2	Industrial Arts
46	26.1	3	Other
15	8.5	4	Industrial Technology
5	2.8	5	Vocational & Technical Education
3	1.7	6	Industrial Studies
0	0	7.5	Business & Industry
0	0	7.5	Practical Arts, Technical Education, and Voc Ed

Question 51. In which of the following areas do you anticipate adding new courses?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
70	39.8	1	Plastic Technology
66	37.5	2	Manufacturing
65	36.9	3	Energy, Power, and Transportation
64	36.4	4	Construction
49	27.8	5	Industrial Materials
46	26.1	6.5	Industrial Processes
46	26.1	6.5	Graphic Communication
33	18.8	7	Industrial Electronics
29	16.5	8	Other
24	13.6	9	Instrumentation & Automation
16	9.1	10	Design

Question 52. If special requirements are required for admission of new students, which form do they follow?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
77	13.8	1	High school grade point factored with test scores
75	42.0	2	No additional requirements for junior college transfers
64	36.4	3	No additional requirements for transferring state college or university transfers
44	25.0	4	High school diploma only
39	22.2	5	High school grade point
17	9.7	6	Other
8	4.5	7	Industrial or professional experience factored with test scores
7	4.0	8	Added test requirements for all transfer students
5	2.8	9	Test scores only
2	1.1	10	Industrial or professional experience only

Question 53. Does your department require admission tests or special requirements for any of the following?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
40	22.7	1	Persons from high school
38	21.6	2	Persons without a high school diploma
22	12.5	3	Persons employed in industry with no college
20	11.4	4.5	Persons from another in-state college or university

Question 53 cont'd

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
20	11.4	4.5	Persons from an out-of-state college or university
18	10.2	5	Junior college transfers
16	9.1	6	Persons being discharged from military with no previous college
9	5.1	7	Persons who are transferring from another department on campus
4	2.3	8	Teacher and administrators who need specific courses

FACILITIES AND EQUIPMENT

Question 54. What office equipment is supplied for faculty use?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
147	83.5	1	Telephone in each office
122	69.3	2	Audio visual equipment
91	51.7	3	All above available at a central location
84	47.7	4	Typewriter in each office
46	26.1	5	Intercom between offices
34	19.3	6	Microfilm and Fiche readers
9	5.1	7	Dictation equipment in each office
6	3.4	8	Calculator in each office
0	0	9	Computer terminal in each office

Question 55. Which of the following are typical of your department's laboratory.

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
141	80.1	1	The instructor provides the laboratory maintenance within his laboratory
95	54.0	2	Maintenance performed by student under laboratory instructor's supervision
69	39.2	3	Maintenance personnel are available from a central pool within the university or college
55	31.3	4	Maintenance personnel are available to repair equipment within department
58	33.0	5	A class is offered which instructs and performs laboratory maintenance
52	29.5	6	Students maintain laboratory as part of class requirements
46	26.1	7	Graduate assistants maintain laboratories
22	12.5	8	Equipment maintained by outside contracting company
16	9.1	9	Other

Question 56. Does your department supply laboratory supervision beyond class scheduled hours by any of the following?

Gross Total	Percentage of Total Response	Rank Order	Response Statement
98	55.7	1	Class Professor
66	37.5	2	Teaching Assistant
47	26.7	3.5	Student employee
47	26.7	3.5	Open laboratory

Question 56 cont'd.

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
20	11.4	4	Senior student
17	9.7	5	Member of an advanced class
8	4.5	6.5	Technician
8	4.5	6.5	Member of the class
7	4.0	7	Part of a student's class requirements
4	2.3	8	Other

Question 57. What office space is allotted to your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
136	77.3	1	One man per office
53	30.1	2	Two men per office
29	16.5	3	A graduate center provided with desks
14	8.0	4	Two master's or doctoral candidates
13	7.4	5	Other
6	3.4	6.3	Three men per office
6	3.4	6.3	One master's or doctoral candidate per office
6	3.4	6.3	One faculty member and one master or doctoral candidate
1	.6	7	One faculty member and officers of student professional organization
0	0	8	Two faculty members and two master's or doctoral candidates

Question 58. What provisions are available for Individual Studies by the students?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
139	79.0	1	Special problems directed by faculty member
73	41.5	2	Open laboratory facilities
67	38.1	3	Technical library within the department
50	28.4	4	Video tape
48	27.3	5	Closed loop films
35	19.9	6	Individual study center or learning center
25	14.2	7	Programmed instruction
21	1.9	8	Other

COURSE OFFERINGS

Question 59. How many students are taught in service courses for other departments other than general education?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
54	30.7	1	30-49
19	10.8	2	100-149
16	9.1	3	50-59
13	7.4	4	60-79
12	6.8	5.5	150-199
12	6.8	5.5	More than 300
10	5.7	6	80-99
7	4.0	7	200-249
1	.6	8	250-300

Question 60. How many student teacher visits does your department adviso make per student each semester?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
60	34.1	1	3-4
35	19.9	2	0-1
25	14.2	3.5	1-2
25	14.2	3.5	5-6
9	5.1	4.5	7-8
9	5.1	4.5	15 or more
7	4.0	5	9-10
1	.6	6	11-12
0	0	7	13-14

Question 61. Which of the following types of courses are offered primarily for engineering students by your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
60	34.1	1	Engineering or mechanical drawing
48	27.3	2	Descriptive geometry
31	17.6	3	General education elective for any student
17	9.7	4	Technical elective
16	9.1	5	Industrial Safety
15	8.5	6	Manufacturing Processes
12	6.8	7	Materials and Materials processes
5	2.8	8	Time and Motion Study
1	.6	9	Cartology

Question 62. Are any courses taught by your department for other departments?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
55	31.3	1	Education
35	19.9	2	Other
27	15.3	3	Recreation
26	14.8	4	Engineering
21	11.9	5	Occupational Therapy
19	10.8	6	Art
18	10.2	7	Agriculture
14	8.0	8	Business
10	5.7	9	Vocational Guidance
8	4.5	10	Industrial Design

Question 63. What is the ratio of laboratories to classrooms in your department, excluding faculty offices?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement		
44	25.0	1	Laboratory 5	:	Classroom 1 or more
37	21.0	2	3	:	1
33	18.8	3	2	:	1
29	16.5	4	1	:	1
11	5.3	5	4	:	1
5	2.8	6	1	:	2
4	2.3	7	1	:	5 or less
1	.6	8	1	:	3
0	0	9	1	:	4

Question 64. How many Industrial Arts teacher majors were student teaching last semester? (exclude summer session, spring or fall only).

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
38	21.6	1	10-14
34	19.3	2	5-9
29	16.5	3	15-19
22	12.5	4	0-4
14	8.0	5	30-49
12	6.8	6	20-24
11	6.3	7	50-99
10	5.7	8	25-29
1	.6	9	100-159
0	0	10	160 or more

Question 65. How many semester units (hours) are granted to a major for student teaching one semester?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
105	59.7	1	8 or more
44	25.0	2	6
7	4.0	3	7
6	3.4	4	3
5	2.8	5	5
4	2.3	6	4
2	1.1	7	0
0	0	8.5	1
0	0	8.5	2

SERVICES AVAILABLE

Question 66. What hourly rate do you pay student assistants?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
96	54.5	1	$1.75 or less
38	21.6	2	1.76-2.00
14	8.0	3	2.01-2.25
11	6.3	4	2.26-2.50
3	1.7	5	2.51-2.75
2	1.1	6	3.51 or more
1	.6	7.5	2.76-3.00
1	.6	7.5	3.26-3.50
0	0	8	3.01-3.25

Question 67. How much custodial help is assigned to your building?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
72	40.9	1	2-3
61	34.7	2	0-1
18	10.2	3	4-5
6	3.4	4	8-9
5	2.8	5	6-7
3	1.7	6	10-11
1	.6	7	16 or more
0	0	8.5	12-13
0	0	8.5	14-15

Question 68. How many full time (paid) maintenance technicians are assigned to your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
138	78.4	1	0-1
12	6.8	2	2-3
1	.6	3	6-7

(no school reported more than 7 technicians)

Question 69. What provisions are available for student involvement on program or departmental committees?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
84	47.7	1	Students are represented by department clubs
54	30.7	2	Students are represented by professional organizations
47	26.7	3	Students are represented on all program or departmental faculty committees
45	25.6	4	Students are represented on curriculum committees
35	19.9	5	Students are represented on academic policy and procedures committees
17	9.7	6	Students are represented only on committees which do not concern departmental policy

Question 70. How much money was allocated to your department this year for student assistance?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
81	46.0	1	$2,000 or less
28	15.9	2	$3,000-3,999
13	7.4	3	$4,000-4,999
11	6.3	4	$10,000 or more
7	4.0	5	$5,000-5,999
6	3.4	6	$6,000-6,999
5	2.8	7	$8,000-8,999
4	2.3	8	$7,000-7,999
0	0	9	$9,000-9,999

Question 71. Does your department supply supplementary teaching support by the use of any of the following?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
120	68.2	1	Audio-visual equipment
111	63.1	2	Student employees
109	61.9	3	Reproduction facilities
51	29.0	4	Teaching assistants
50	28.4	5	Obtaining additional literature concerning specific subjects
42	23.9	6	Industrial presentations
30	17.0	7	Laboratory & equipment technicians
19	10.8	8	Teacher aids
18	10.2	9	Allowing temporary additions of space, facilities, or equipment

Question 72. For which of the following is the faculty supplied with secretarial help?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
164	93.2	1	Correspondence
156	88.6	2	Preparation of teaching materials
149	84.7	3	Tests
95	54.0	4	Professional writings
90	51.1	5	Scheduling
85	48.3	6	Recording committee meeting minutes
71	40.3	7	Manuscripts
53	30.1	8	Grading
40	22.7	9	Other

Question 73. What is the faculty to secretary ratio for your department?

Gross Totals	Percentage of Total Response	Rank Order	Response Statement
65	36.9	1	4:1 or less
36	20.5	2	6:1
30	17.0	3	8:1
20	11.4	4	10:1
7	4.0	5	12:1
5	2.8	6	14:1
4	2.3	7	16:1
2	1.1	8	18:1
1	.6	9	20:1 or more

IV. SUMMARY OF FINDINGS

The information gathered by this survey is based upon the knowledge and expertise of the Industrial Arts Teacher Education Department Chairman. Since each man knows his department better than any outside researcher could, the knowledge obtained should yield a reasonable amount of validity to the survey. The writer has rank ordered these statements according to the frequency of response under the Findings section of this monograph. Some of the findings have been summarized herein and generalizations could have been drawn as they became evident while working with the data; however, you are encouraged to draw your own conclusions.

The Industrial Arts Teacher Education departments of the nation are largely made up of the two disciplines, Industrial Arts and Industrial Technology; however, Industrial Arts and Vocation Education was the second rank position as the combination of disciplines taught.

The budget established to replace worn or broken equipment appears to be used primarily for the purchase of government surplus items. Some equipment is replaced by a direct request to the College Controller's

Office. Most departments reported no new construction of Industrial Arts Teacher Education square footage to the year 1975. Some schools planned between 10,000 to 19,000 square feet enlargement. A small number of departments reported they would build 50,000 to 59,000 square feet. Very few departments reported an increase of 150,000 square feet or more.

The largest group of departments reported that the present Industrial Arts facilities are less than 20,000 square feet. The departments do vary in the amount of footage but the majority have less than 59,000 square feet. There are a few departments with over 200,000 square feet.

The enrollments in the Industrial Arts Teacher Education departments are reported most frequently as 76-125 students. The second rank position reported 501 or more students. The third group reported less than 75 students. These figures reveal that there are a considerable number of departments with small enrollments and a few departments with very large enrollments.

Most departments report that they hire 0-2 part-time Industrial Arts Teacher Education faculty. Departments which hire 3-4 part-time faculty members ranked second. A few departments report up to 17 or more part-time faculty members.

The most frequent use of personnel and technical staff support supplied for research are in the areas of innovations and new curriculum. The second largest use of supportive staff, although considerably less, was in administration. The categories of counseling, writing, designing laboratory equipment, and counseling graduate students were distributed somewhat evenly.

The faculty's time allotted to research was 0-5%.

Research courses added during the last 10 years are these: Research Methods and Curriculum were tied in first position; classes in computers were second; classes in statistics were third. Research in curriculum has been a major trend in the past few years.

The new content courses offered within the departmental degree were listed most frequently as Industrial Processes, Industrial Materials and Plastics. Next in order of frequency were Graphic Communications, Pneumatics and Hydraulics.

Industrial processes and materials and plastics are the most common new courses added to our profession.

The teaching areas offered within the major were ranked in terms of frequency as: (1) Drafting, (2) Woodworking and Metals,

(3) Electronics, (4) Machine Shop, (5) Crafts, (6) Graphic Arts, (7) Auto Mechanics, (8) Others, and (9) Photography.

The additional technical areas of the shop requirements offered in the department yield these ranks: (1) Power, (2) Construction and Manufacturing, (3) Materials, (4) Processes, (5) Communication, (6) Transportation, (7) Other, (8) Automation, (9) Cybernation, and (10) Environmental Design (Ecology).

The following areas are anticipated as added new courses: Plastic Technology, Energy Power Transporation and Manufacturing were tied for second position. Construction was in third position, while Industrial Materials was ranked fourth. A tie resulted between Industrial Processes and Graphic Communications for fifth position.

The most frequently reported number of student teacher visits the advisor makes per student each semester is 3 to 4 visits. The second rank was 0-1 visits to students teachers per semester. A few departments make considerably more student teacher visits.

Departmental clubs and professional organizations are the means whereby student involvement in departmental faculty committees is provided.

COLLEGES and UNIVERSITIES CONTACTED FOR THIS STUDY

Alabama

Alabama Agricultural and Mechanical University
Auburn University
Tuskegee Institute
University of Alabama

Arizona

Arizona State University
Northern Arizona University

Arkansas

Agricultural, Mechanical, and Normal College
Arkansas A & M College, College Heights Branch
State College of Arkansas
University of Arkansas

California

California State College Long Beach
California State Polytechnic College
Chico State College
Fresno State College
Humboldt State College

California State College at Los Angeles

Pacific Union College

San Diego State College

San Francisco State College

San Jose State College

University of California

Colorado

Adams State College

University of Northern Colorado

Colorado State University

Southern Colorado State College

Western State College of Colorado

Connecticut

Central Connecticut State College

University of Connecticut

Florida

Florida A. and M. University

Florida State University

University of Florida

University of Miami

University of South Florida

University of Tampa

University of West Florida

Georgia

Berry College
Georgia Southern College
Savannah State College
University of Georgia

Hawaii

Church College of Hawaii
University of Hawaii

Idaho

University of Idaho

Illinois

Bradley University
Eastern Illinois University
Illinois State University
Chicago State College
Northern Illinois University
Southern Illinois University
University of Illinois
Western Illinois University

Indiana

Ball State University
Indiana State University
Purdue University

IOWA

Iowa State University

University of Northern Iowa

Westmar College

William Penn College

KANSAS

Bethel College

Fort Hays Kansas State College

Friends University

Kansas State College of Pittsburg

Kansas State Teachers College

McPherson College

Wichita State University

KENTUCKY

Berea College

Eastern Kentucky University

Kentucky State College

Morehead State University

Murray State University

University of Kentucky

Western Kentucky University

LOUISIANA

Grambling College

Louisiana State University

Northwestern State University

Southeastern Louisiana University

Southern University and A.&M. College

University of Southwestern Louisiana

MAINE

University of Maine at Portland-Gorham

MARYLAND

University of Maryland-Eastern Shore

University of Maryland

Fitchburg State College

MICHIGAN

Andrews University

Central Michigan University

Eastern Michigan University

Ferris State College

Michigan State University

Northern Michigan University

The University of Michigan

Wayne State University

Western Michigan University

MINNESOTA

Bemidji State College

Mankato State College

Moorhead State College

St. Cloud State College

University of Minnesota

University of Minnesota, Duluth

Winona State College

MISSISSIPPI

Alcorn Agricultural and Mechanical College

Jackson State College

Mississippi State University

Mississippi Valley State College

University of Southern Mississippi

MISSOURI

Central Missouri State College

Northeast Missouri State College

Northwest Missouri State College

Southeast Missouri State College

Southwest Missouri State College

University of Missouri--Columbia

MONTANA

Montana State University

Northern Montana College

Western Montana College

NEBRASKA

Chadron State College

Kearney State College

Peru State College

University of Nebraska

University of Nebraska at Omaha

Wayne State College

NEVADA

University of Nevada

NEW HAMPSHIRE

Keene State College

NEW JERSEY

Glassboro State College

Montclair State College

Newark State College

Trenton State College

NEW MEXICO

Eastern New Mexico University

New Mexico Highlands University

University of New Mexico

NEW YORK

City University of New York
The City College

New York University

State University College at Buffalo

State University College at Buffalo, Vocational - Technical Education Division

State University College at Oswego

State University College at Oswego, Department of Vocational Technical Education

NORTH CAROLINA

North Carolina Agricultural & Technical State University

Appalachian State University

East Carolina University

Elizabeth City State University

North Carolina State University at Raleigh

Western Carolina University

NORTH DAKOTA

University of North Dakota

University of North Dakota - Ellendale Branch

OHIO

Bowling Green State University

Central State University

Kent State University

College of Education

Miami University

Ohio Northern University

The Ohio State University

The Ohio State University, Academic Faculty of Vocational-Technical Education

Ohio University

University of Cincinnati

University of Toledo

Wilmington College

OKLAHOMA

Central State College

East Central State College

Langston University

Northeastern State College

Northwestern State College

Oklahoma State University

Panhandle State College

Southeastern State College

Southwestern State College

OREGON

Oregon State University

PENNSYLVANIA

California State College

Cheyney State College

Millersville State College

The Pennsylvania State University

The Pennsylvania State University, Department of Vocational Education

The Pennsylvania State University

Temple University

University of Pittsburgh

PUERTO RICO

University of Puerto Rico

RHODE ISLAND

Rhode Island College

SOUTH CAROLINA

Clemson University

South Carolina State College

SOUTH DAKOTA

Black Hills State College

Dakota State College

Northern State College

South Dakota State University

Southern State College

TENNESSEE

Austin Peay State University

East Tennessee State University

Memphis State University

Middle Tennessee State University

Southern Missionary College

Tennessee State University

Tennessee Technological University

The University of Tennessee

TEXAS

Abilene Christian College

East Texas State University

North Texas State University

Prairie View Agricultural and Mechanical College

Sam Houston State University

Southwest Texas State University

Southwestern Union College

Sul Ross State University

Tarleton State College

Texas A&M University

Texas A&I University

Texas Southern University

University of Houston

West Texas State University

UTAH

Southern Utah State College

Utah State University

VERMONT

University of Vermont

VIRGINIA

Hampton Institute

Old Dominion University

Virginia Polytechnic Institute & State University

Virginia State College

Norfolk State College

WASHINGTON

Central Washington State College

Eastern Washington State College

University of Washington

Walla Walla College

Washington State University

Western Washington State College

WEST VIRGINIA

Fairmont State College

Salem College

West Virginia Institute of Technology

West Virginia State College

West Virginia University

WISCONSIN

University of Wisconsin--Stout

University of Wisconsin

University of Wisconsin--Platteville

WYOMING

University of Wyoming